

HPFE Series

High-throughput Pressurized Fluid Extractor

High extraction efficiency | Minimal solvent consumption | Wide applications



Extraction of organic compounds from complex matrices is commonly seen as a challenging problem in sample preparation. Analytes of interest such as polycyclic aromatic hydrocarbon (PAH) and polychlorinated biphenyls (PCB) can have strong absorption with sample matrix, can cause failure in conventional liquid extraction.

And conventional liquid extraction methods such as Soxhlet extraction have large solvent consumption and long extraction time, consequently low efficiency became a common issues to lab technicians.

Based on these above, RayKol HPFE 06 high-throughput pressurized fluid extractor can raise the boiling point of solvents using high pressure. With high temperature, solubility and diffusibility of target compounds are increased substantially, to reduce extraction time to 15-30 minutes from more than 10 hours and decrease solvent consumption to 20-50mL from 200mL, therefore to boost efficiency and lower cost.

Application fields

Environment

soil/hazardous residues and pesticides in solid waste/herbicides

Food

pesticide residues in food/food additives

Agriculture

pesticide residues in crops/extracted seed oil

Others

polymers, medicines, petrochemicals.

Application examples

- Determination of polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzo-p-furans (PCDFs) Isotope dilution HRGC-HRMS
- Waste solid - Extraction of organic compounds - Pressurized fluid Extraction (PFE)
- Soil and sediment - Extraction of organic compounds - Pressurized fluid extraction (PFE)
- Determination of pesticides residues in tea - GC/MS method
- Determination of 475 pesticides and related chemicals resides in grains Gas chromatography-mass spectrometry
- Determination of ginsenosides in ginseng - LC-UV method
- ASTM D7567-2009 Standard test method for determing gel content in crosslinked ethylene plastics using pressurized liquid extraction

The Highest Throughput
/ 6 samples simultaneously at one run
/ Over 96 samples per day per HPFE



Good Compatibility

Good Compatibility

- Available for 4 types of solvents, can dispense and mix in any ratio.
- Range of extraction cells: 11 - 120mL.
- Range of collection tubes: 60 - 240mL, compatible to concentration module.
- Can apply to any extraction from solid or semi-solid matrices.

Smart Software

- Simple method editing, programmed run.
- Intutive interface, ONE touch to process.
- 10-inch built-in touch screen, space saver.

Safe Protection

- Protection measures for over pressurized and heated as well as leakages.
- Compact structure, sealed design, with active exhaust system.
- Full log records and monitoring, alarm reminder for any method errors.

Organic Sample Preparation Solution

Automation solution for organic sample preparation consists of a series of RayKol automated products, can be applied to large variety of detections, and ultimately build a high-efficient, safe and fully automated laboratory, and work in unattended environment.

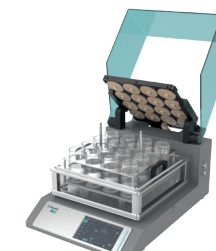
Extraction ••• Purification ••• Concentration ••• Liquid Preparation ••• Analysis



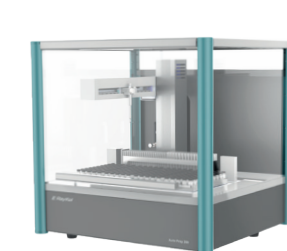
High-throughput Pressurized Fluid Extractor



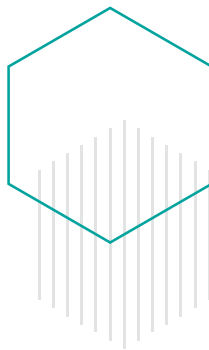
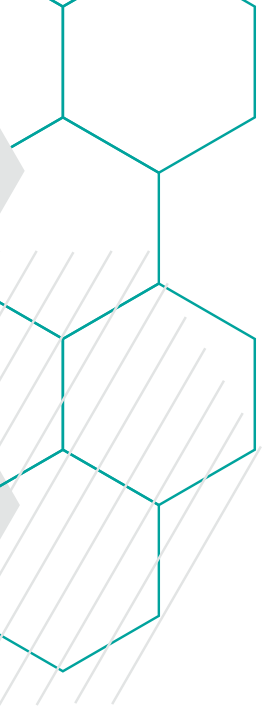
Automated Solid Phase Extraction System



Automated Vacuum Evaporation System



Automated Liquid Handling Station



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